WHAT IS CLAIMED IS:

1. A head suspension assembly comprising:

a suspension portion including a suspension arm;

a head portion coupled to the suspension arm including a slider body having a leading edge, trailing edge and opposed sides and one or more transducer elements; and

a magnetic bearing element on the slider body or suspension portion to form a magnetic bearing assembly operable to induce a repulsion force to provide a fly-height for the head portion of the head suspension assembly.

2. The head suspension assembly of claim 1 wherein the magnetic bearing element includes at least one bearing magnet.

3. The head suspension assembly of claim 2 wherein the at least one bearing magnet includes a permanent magnet.

4. The head suspension assembly of claim 2 wherein the at least one bearing magnet includes an electro-magnet.

5. The head suspension assembly of claim 1 wherein the magnetic bearing element includes bearing magnets on opposed sides of either a roll axis, a pitch axis or both, of the slider body.

6. The head suspension of claim 1 wherein the magnetic bearing element includes a bearing magnet proximate to a trailing edge of the slider body spaced from a pitch axis of the slider body.

7. The head suspension assembly of claim 1 wherein the slider body includes at least one raised bearing surface and at least one recessed bearing surface.

8. The head suspension assembly of claim 1 wherein the transducer element includes a longitudinal recording element.

9. The head suspension assembly of claim 1 wherein the magnetic bearing element includes a conductive element on the slider body or suspension portion.

10. A bearing assembly for a data storage device comprising:

a head suspension assembly including a suspension portion including a suspension arm and a head portion including a slider body having a leading edge, trailing edge and opposed sides and a transducer portion including a transducer element;

a data storage disc having a recording layer; and

a magnetic bearing element on the slider body or suspension portion and a magnetic bearing element on the data storage disc and the magnetic bearing elements including a bearing magnet and a conductive element to provide a repulsion force between the head suspension assembly and the data storage disc to provide a fly height for the head portion of the head suspension above a disc surface.

11. The bearing assembly of claim 10 wherein the bearing magnet is a permanent magnet.

12. The bearing assembly of claim 10 wherein the bearing magnet is an electro-magnet.

13. The bearing assembly of claim 10 wherein the bearing magnet is formed on the slider body or suspension portion and the disc includes a conductive layer or substrate to form the conductive element.

14. The bearing assembly of claim 10 wherein the conductive element is formed on the slider body or the suspension portion and the bearing magnet is formed of a magnetic recording layer on the data storage disc.

15. The bearing assembly of claim 10 wherein the transducer element includes a longitudinal recording element.

16. The bearing assembly of claim 12 including a controller coupled to the electro-magnet to selectively energize the magnetic bearing assembly.

17. The bearing assembly of claim 10 wherein the recording layer is a magnetic recording layer.

18. A method for reading or writing data relative to a disc comprising steps of:

energizing a magnetic bearing assembly to provide a lifting force to a head; and

rotating the disc to read or write data to the disc.

19. The method of claim 18 wherein the disc is rotated after energizing the magnetic bearing assembly.

20. The method of claim 18 wherein the magnetic bearing assembly includes an electro-magnet and comprising the step of:

energizing the electro-magnet to dynamically adjust a fly height of the head.

21. A method for reading or writing data relative to a disc comprising steps of:
rotating a disc to create a repulsion force between a magnet and a conductive element to provide a lifting force to a head; and
reading or writing data to the rotating disc.

22. The method of claim 21 and comprising the steps of:
supplying a load force to the head at a load point to define a roll axis; and
providing the repulsion force on opposed sides of the roll axis of the head.

23. A method for measuring fly height or vibration comprising the steps of:
rotating a disc; and
measuring voltage or current across an inductive coil to measure fly height or head vibration.

24. The method of claim 23 and further comprising the step of detecting asperities or defects on the disc based upon the measured voltage or current fluctuations.